

NEW SPECIES OF TETRANYCHID MITES¹

(Acarina)

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The aid given by Dr. A. E. Pritchard and Dr. E. A. McGregor in encouragement and study of mite specimens from Louisiana is gratefully acknowledged. The following new species were discovered in the course of this investigation.

***Tetranychus merganser* Boudreaux, new species**

Tetranychus merganser resembles most *T. tumidus* Banks and *T. atlanticus* McGregor. It differs from *tumidus* in lacking the large empodial spur and in having the aedeagus terminating in a rather large distal knob, shaped very much like the head of a merganser duck. From *atlanticus* it differs in being red instead of greenish, and in having a more prominent empodial spur. The aedeagus terminates in a large distal knob, rounded anteriorly and above, and the bend of the shaft closely approaches an angle of 90°, while in *atlanticus* the bend of the external shaft is usually 60°, and the distal knob is smaller with the upper surface very broadly angulate. The empodial spurs of *atlanticus* are quite obscure.

Female.—Palpus with terminal sensillum about twice as long as wide. Stylophore rounded mediodistally. Peritreme chambered, hooked distally, chamber at bend of hook often with a swelling. Tarsus I bearing 4 or 5 tactile setae and one sensory seta proximad of but in vicinity of proximal duplex setae; empodial spur rudimentary; a very tiny bristle usually visible below the three pairs of proximo-ventral hairs. Dorsum between inner lumbar and inner sacral setae with striae transverse and surrounded by a rhomboidal area of striae; striations longitudinal between both inner lumbar and both inner sacral setae. Dorsal setae slender, tapering, weakly pilose and longer than intervals between them. Length of body from posterior end to tip of rostrum 0.54. mm.

Male.—Palpus with terminal sensillum slender, about three times as long as thick. Aedeagus with proximal portion of external shaft parallel sided, narrowing abruptly downward and curving smoothly upward distally, terminating in a large distal knob whose anterior projection is broadly rounded, and whose posterior projection forms a sharp beak; upper surface of distal knob smoothly rounded. Length of body 0.45 mm.

¹ This paper has resulted from a study partly supported by a grant from the Freeport Sulphur Company, and partly by the Louisiana Agricultural Experiment Station at Baton Rouge.

Holotype—Male, BATON ROUGE, LOUISIANA, July 7, 1953 (L. D. Newsom) on *Ligustrum vulgare* L.; type No. 2172 in U. S. National Museum. *Morphotype*—Female, same data as holotype; type deposited in U. S. National Museum. *Paratypes*—Six males and thirty-six females, all from *Ligustrum vulgare*, in collection of the writer. *Localities*—Monroe, Shreveport, Baton Rouge and Natchitoches, Louisiana.

This mite is carmine, with lateral dark spots extending to the posterior end in older females. Very little web is produced, but the leaves show signs of injury in becoming spotted with yellow where a colony is established.

Tetranychus cocosinus Boudreaux, new species

Tetranychus cocosinus is nearly identical in morphological details with *T. cocosi* (McG.). It differs in having the posterior angulation of the distal knob of the aedeagus relatively longer than in *cocosi*, and with the distal knob slightly sigmoid on the upper surface, the tip bending downward. In addition, the terminal sensillum of the palpus of the male is four or more times its thickness, broader at tip, while in *cocosi* the sensillum is about three times as long as thick and parallel-sided. The differences in shape are the same in the females, but the sensillum is shorter than in the males. *T. cocosi* is described as "pale chestnut red" in life and feeds on the royal palm in California. *T. cocosinus* is dark purple, nearly black, and has been collected on *Rubus*, *Rosa*, *Ulmus* and *Celtis* (Hackberry) in Louisiana.

Female.—Body from above broadly rounded. Stylophore rounded medio-distally or very slightly cleft. Terminal sensillum of palpus about twice as long as thick, broader near tip. Tarsus I bearing 4 tactile setae proximad of duplex setae; empodial spur rudimentary but obvious. Striations dorsally between inner lumbar and inner sacral setae as in *T. merganser* above. Dorsal setae slender, weakly pilose and longer than intervals between them. Length of body 0.49 mm.

Male.—Terminal sensillum of palpus slender, one-fourth as thick as long, tip slightly broadened and angulate. Aedeagus with external shaft broad at base, weakly tapering to upward bend where it narrows abruptly, and tipped with a distal knob whose anterior and posterior projections are acute, the anterior one shorter than the posterior projection, which bends slightly downward. Distal knob about three-eighths as long as external shaft, with its axis parallel with upper surface of shaft and its upper surface slightly sigmoid anteriorly. Length of body 0.34 mm.

Holotype—Male, PORT ALLEN, LOUISIANA, Aug. 18, 1953, (H. B. Boudreaux) on *Celtis* sp.; type No. 2174 in U. S. National Museum. *Paratypes*—Nine males and eight females from *Rubus* sp., Natchitoches, La., one male from *Rubus*, Baton Rouge, La., two males and four females from Hackberry, Port Allen, Louisiana, and five males and ten females from *Ulmus americanus*, Baton Rouge, Louisiana. In collection of the writer.

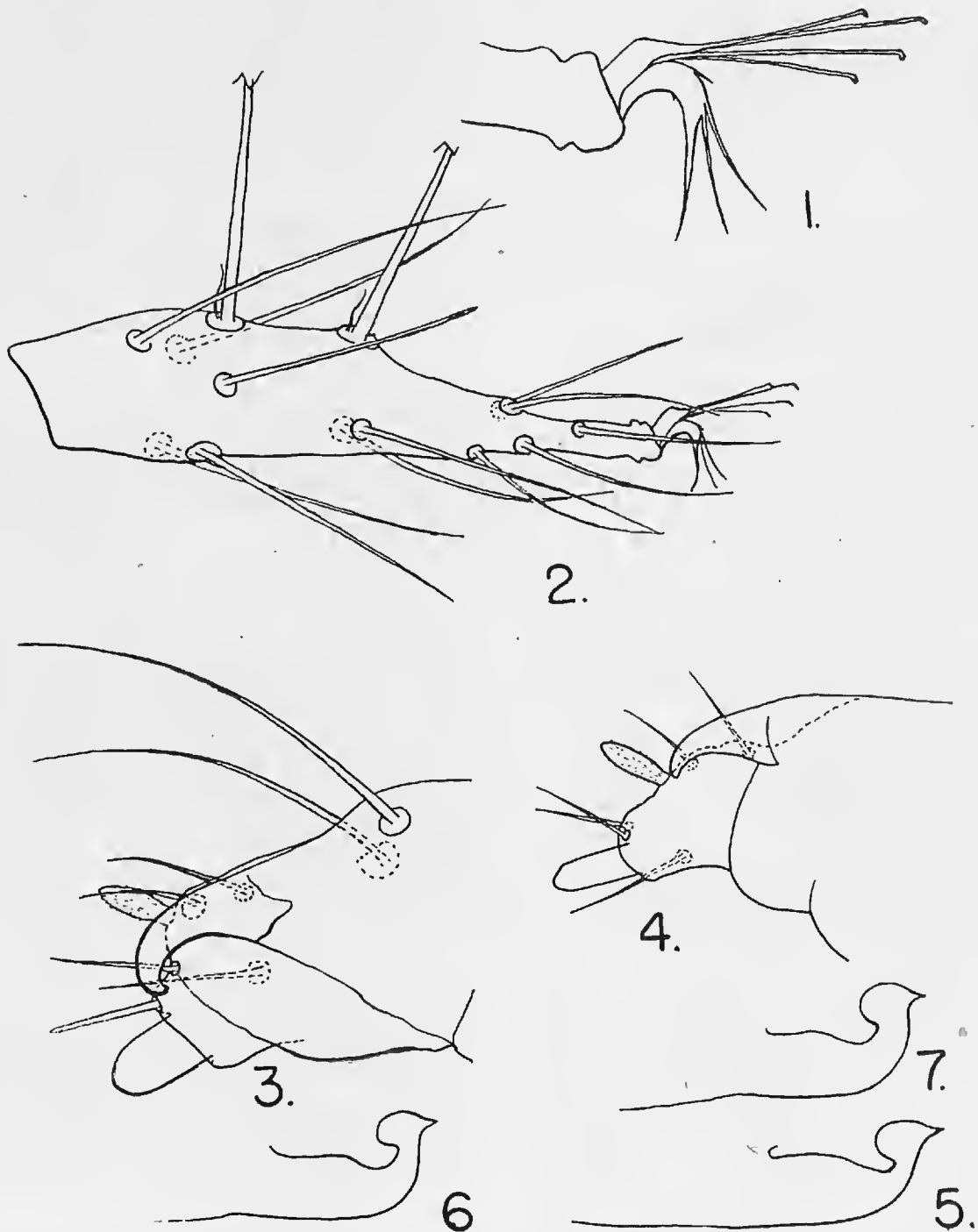


PLATE I

Tetranychus merganser. Fig. 1, female, pretarsus I; Fig. 2, female, tarsus I; Fig. 3, female, palpus; Fig. 4, male, palpus; Fig. 5, male, aedeagus (holotype); Fig. 6 and 7, aedeagus, male paratypes.

Specimens were taken on Rose, Baton Rouge, but they are not included in the type series. The original slides were poorly made, and the specimens were lost in attempting to remount them.

The color in life is dark reddish-purple, some nearly black. Males paler, as usual. Webbing is produced profusely, and *Rubus* leaves are markedly injured.

Tetranychus magnoliae Boudreaux, new species

Tetranychus magnoliae is most closely related to *T. tumidus* Banks and *T. mexicanus* McGregor. All have a prominent empodial spur above the three pairs of empodial hairs on all tarsi. The only

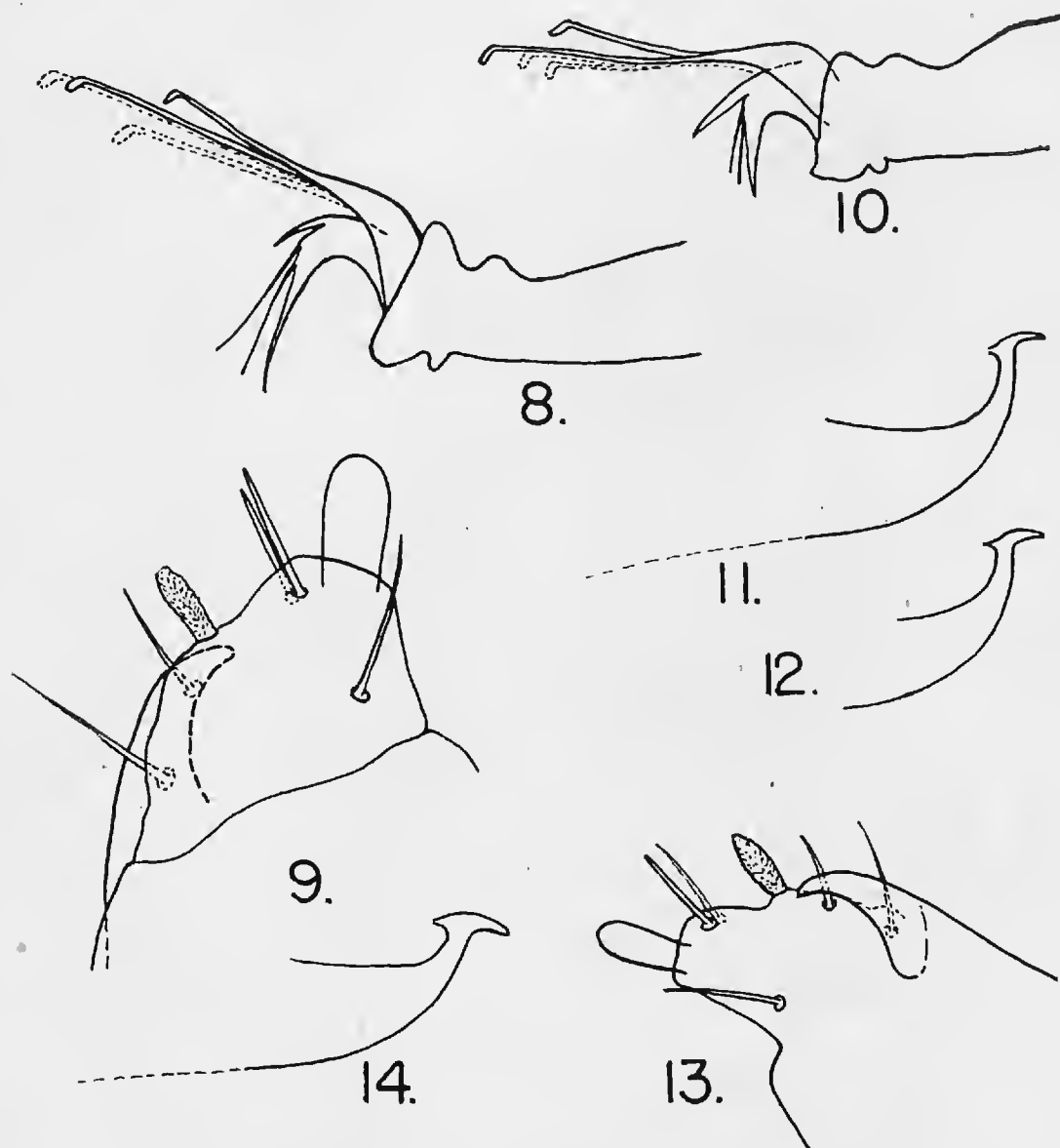


PLATE II.

Figures 8-13. *Tetranychus cocosinus*. Fig. 8, female, pretarsus I; Fig. 9, female, palpus; Fig. 10, male, pretarsus I; Fig. 11, male, aedeagus (holotype); Fig. 12, male, aedeagus of paratype; Fig. 13, male, palpus.

Figure 14. *T. cocosi*, aedeagus, male from royal palm, California.

other species with such a spur is *T. braziliensis* McGregor, but the latter has additional small setae and the structure of the empodium if different. *T. magnoliae* males differ from those of *T. tumidus* and *T. mexicanus* in having a much longer posterior angulation on the distal knob of the aedeagus.

Female.—Thickness of terminal sensillum of palpus about three-fifths the length, and its length about the same as that of the dorsal sensillum. Stylophore rounded anteriorly. Peritreme chambered, and hooked distally. Tarsus I bearing 4 or 5 setae proximad of the proximal duplex setae; empodial spur one-half as long as the proximo-ventral empodial hairs; a pair of tiny but distinct setae ventrally proximad of the base of the six empodial setae (these tiny setae are easily visible on all tarsi, male and female). Posterior dorsal striations on hysterosoma as in *T. merganser* and *T. cocosinus*. Dorsal setae long, slender and tapering, longer than intervals between them. Length of body to tip of rostrum 0.53 mm.

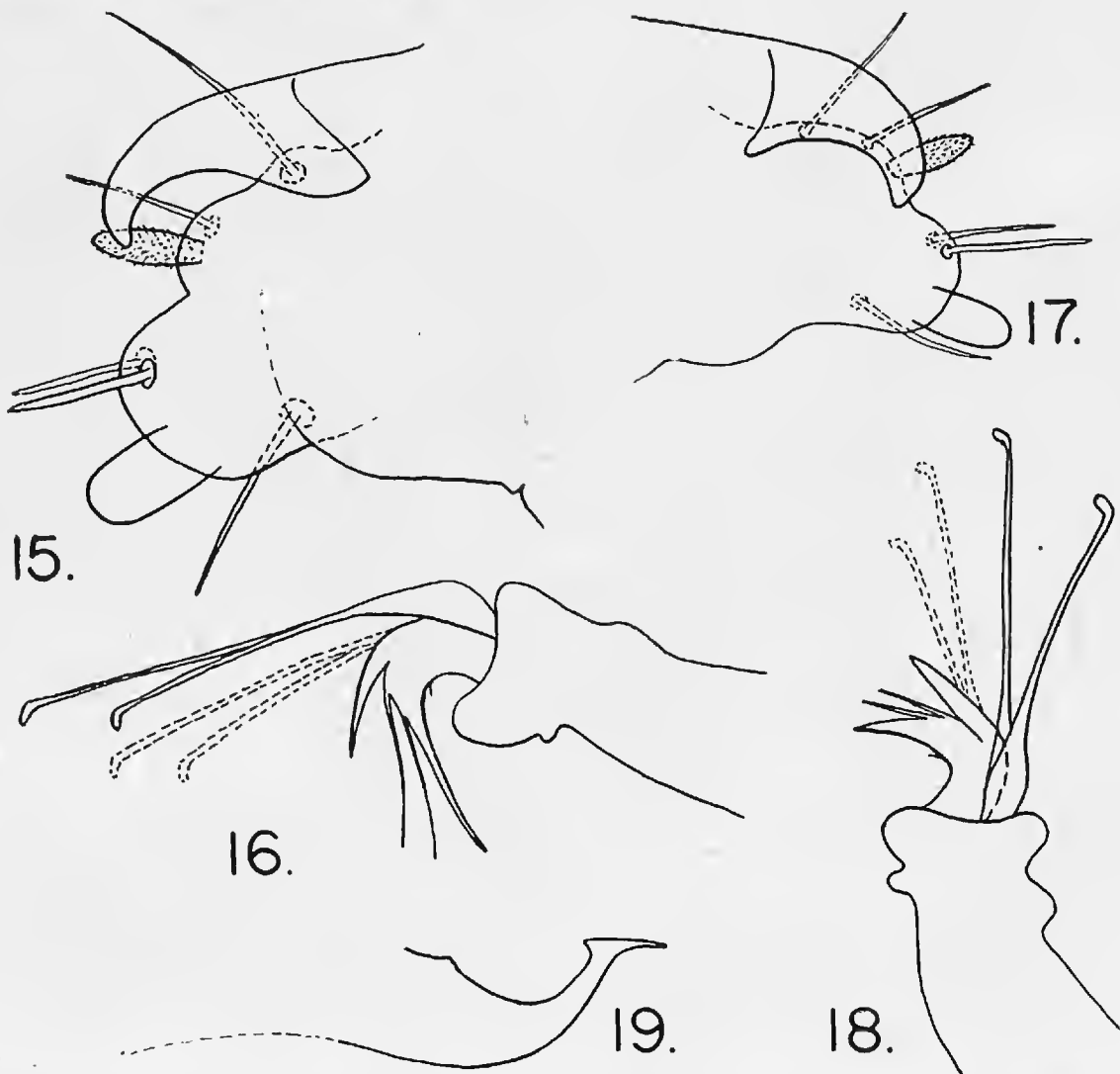


PLATE III.

Tetranychus magnoliae. Fig. 15, female, palpus; Fig. 16, female, pretarsus I; Fig. 17, male, palpus; Fig. 18, male, pretarsus I; Fig. 19, male aedeagus.

Male.—Palpus with terminal sensillum slightly longer than twice its thickness, and slightly longer than the dorsal sensillum. Tarsus I with dorsal empodial spur nearly as long as the six proximo-ventral hairs, these not fused as in most species of *Tetranychus*, but distinct and separate for most of their length, the ventral pair much thicker than the other two pairs; a pair of tiny setae near the base of the largest pair of empodial setae, as in all other tarsi. Aedeagus with external shaft emerging broadly, and tapering quickly outward as it curves upward; the distal knob with a sharp acute anterior angulation, the posterior angulation acuminate and about six times as long as the anterior point. Length of body 0.35 mm.

Holotype—Male, BATON ROUGE, LOUISIANA, August 20, 1953. (H. B. Bordreaux) on *Magnolia grandiflora*; type no. 2173 in U. S. National Museum. *Paratypes*—Nine males and seventeen females from *Magnolia* and two males and three females from *Liriodendron tulipifera*, all taken in Baton Rouge, Louisiana. In collection of the writer.

On magnolia this mite spins a profuse web on the upper surface of the leaves, near the midrib, and causes a distinct discoloration of the leaves as the colony gets older. Apparently the dense hairy lower surface of the leaves is not a suitable habitat. On the tulip tree the mites inhabit both surfaces of the leaves. Usually species of *Tetranychus* prefer the lower leaf surface, in contrast to this species. The living mites are carmine red, with paler legs and propodosoma. The eggs are unusually large, dark cream colored and spherical.

TWO NEW DIPTERAN PARASITES OF AUTOGRAPHA CALIFORNICA

Thirty specimens of *Autographa californica* Speyer, larvae and pupae, were obtained on spinach four miles west of Walla Walla, Walla Walla County, Washington, during the months of October and November, 1953. Twenty per cent parasitism by two genera of Larvaevoridae (Tachinidae) was observed. They were *Madremyia saundersii* (Will.) and *Achaetoneaura archippivora* (Will.), of which the latter is new for this particular host as far as could be ascertained. The pupation period of both these flies was observed to be approximately 16–17 days, the mean being 16.5 days.

The writer is indebted to Curtis W. Sabrosky of the United States Department of Agriculture for determining the above parasites.—DON R. SEIDEL.